

What is claimed is:

1. An image analysis device comprising:

a fluorescent screen for creating a diffraction pattern that results from reflection high-energy electron diffraction;

a photoreceptor for optically acquiring the diffraction pattern that appears on the fluorescent screen; and

a halation-prevention filter for location along a light path connecting the fluorescent screen and the photoreceptor, in which a transmittance of the visible light transmitted through the filter is minimum at a center of the filter and increases with a distance from the center.

2. The image analysis device of claim 1, in which the transmittance of the halation-prevention filter increases in proportion to r^n , where r is the distance from the center of the filter.

3. The image analysis device of claim 1 further comprising an in-plane movement means that moves the halation-prevention filter in a plane orthogonal to the light path.

4. The image analysis device of claim 1, further comprising:

a point light source;

an emission controller for controlling the generation of light by the point light source;

an intensity measurement means for measuring, via the photoreceptor, the intensity of the visible light emitted from the diffraction pattern of the fluorescent screen and the intensity of the point light source-emitted visible light that passed through the filter;

an intensity decrease rate computation means for computing a rate of decrease in the intensity of the visible light transmitted through the filter, based on the intensity of the visible light emitted by the point

12 light source, that was measured by the intensity measurement
13 means; and

14 a corrected-intensity computation means that, based on the decrease rate
15 computed by the intensity decrease rate computation means,
16 computes the corrected intensity used to correct the intensity of the
17 visible light emitted from the diffraction pattern of the fluorescent
18 screen, that was measured by the photoreceptor.